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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,285	05/15/2001	Clarence T. Tegreene	1788-13	2919

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EXAMINER

KOVAL, MELISSA J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,285

Applicant(s)

TEGREENE ET AL.

Examiner

Melissa J Koval

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-12 and 16-20,24,26-28, and 30 is/are rejected.
- 7) ☒ Claim(s) 3,9,13-15,25 and 29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The distinction between generating an image and projecting an image is not clear from the steps of the method claim. Logically an image would be generated and then projected. The method claim suggests that a second projection step may exist, but this is not clear from the claim language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4-6, 20, 24, 26-28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider.

Refer to Figures 1 and 8 of Schneider et al., for example.

Claim 1 sets forth: "An image projection system, comprising:

a first optical projector operable to project a first portion of an image in a first color in response to a first optical signal (projector 101, for example);

a second optical projector operable to project a second portion of the image in a second color in response to a second optical signal (projector 102, for example);

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and an image generator operable to respectively generate the first and second optical signals (processor/computers 113 and 114, corresponding to projectors 101 and 102).

With respect to images 107-112, each individual image can be subdivided into various portions including pixels. For example, refer to column 7, lines 49 through 57. Therefore the limitations of a first portion of an image in a first color and a second portion of an image in a second color are met as each pixel may represent a separate color.

With respect to Figure 8, pixel mapping and alpha blending are discussed. Refer to column 6, lines 65 through 67, and column 7, lines 1 through 62. Therein it can be understood how the processors 113-118 control and manipulate color for each image portion combining to make a complete image on projection screen 100.

With respect to claim 2, refer to Figure 6 and the flowcharts of Figures 7A and 7B. Also refer to column 5, lines 4 through 45, and column 6, lines 6 through 49, of Schneider.

With respect to claim 4, refer to Figure 1 and images 107 and 108, respectively corresponding to projectors 101 and 102, for example.

With respect to claim 5, projectors 101 and 102 are coplanar.

Claim 6 sets forth: "The image projection system of claim 1, further comprising: a third optical projector (projector 103, for example) operable to project a third portion of the image (image 109 corresponding to projector 103) in a third color in response to a third optical signal;

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and wherein the image generator is operable to generate the third optical signal (computer/processor 115 corresponding to image 109).”

Again refer to the discussion of Figure 8 set forth with respect to already rejected claim 1.

Method claim 20 is rejected for essentially the same reasons applied to rejected claim 1 as far as the terms and limitations of the claim can be understood. Schneider teaches a method to accompany the structural elements comprising his projection system. The same arguments apply to the rejection of method claim 30.

The projected image beams from projectors 101 and 102, for example, meet the limitations of claims 24, 26 and 27.

With respect to claim 28, refer to Figure 1 of Schneider.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 10-12, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider.

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With respect to claim 7 take into consideration the arguments already applied to rejected claim 1 in the rejection under 35 USC 102(e) set forth above. Schneider meets all of the limitations of claim 7 except that Schneider shows a common projection screen 100 divided into portions by separate images rather than a screen that is physically divided. It would have been obvious to one having ordinary skill in the art at the time the invention was made to divide the common screen 100 into portions in accordance with the separate projected images if desired, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art.

Nerwin v. Erlichman, 168 USPQ 177, 179.

With respect to claim 8, refer to Figure 6 and the flowcharts of Figures 7A and 7B. Also refer to column 5, lines 4 through 45, and column 6, lines 6 through 49, of Schneider.

Claims 10 and 11 are met by projectors 101 and 102, for example.

Claim 12 is met for the reasons already applied to rejected claim in the rejection under 35 USC 102(e) set forth above.

With respect to claim 16, refer to Figure 1 of Schneider, for example.

In light of the rejection applied to claim 7, common screen 100 meets the limitations set forth in claim 17.

With respect to claim 18, Schneider provides for a third projected image on a third portion of common screen 100. Therefore common screen 100 could be divided into three portions for the same reasons already applied to rejected claim 7.

With respect to claim 19 refer to column 6, lines 36 through 44.

Allowable Subject Matter

Claims 21, 22, and 23 are allowed.

Claims 3, 9, 13, 14, 15, 25, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art neither shows nor suggests an image projection system comprising all of the elements of dependent claim 3 and particularly making use of third and fourth optical signals such that "the image generator is operable to generate third and fourth optical signals and is operable to generate the first and second portions of the image by directing the first and third optical signals and the second and fourth optical signals onto the first and second optical projectors, respectively, the third optical signal operable to set the luminance levels of the regions of the first optical projector to a first predetermined level, the fourth optical signal operable to set the luminance levels of the regions of the second optical projector to a second predetermined level, the first optical signal operable to set the luminance levels of the regions of the first optical projector in relation to the luminance levels of the corresponding sections of the first portion of the image, and the second optical signal operable to set the luminance levels of the regions of the second optical projector in relation to the luminance levels of the corresponding sections of the second portion of the image."

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The prior art of record neither shows nor suggests an image projection system comprising all of the elements of dependent claim 9 and in particular making use of first and second electromagnetic erase beams as set forth in the claim.

The prior art neither shows nor suggests the projection system comprising all of the elements of claim 13 and in particular making use of separate projection and display screens. The same reasons for indicating allowable subject matter apply to claims 14 and 15.

With respect to claim 21, the prior art neither shows nor suggests an image projection system comprising a first and second image amplifiers operable to project first and second portions of an image in a first and second color, respectively, and an image generator operable to scan the first and second electromagnetic beams onto the first and second image amplifiers, respectively.

The prior art neither shows nor suggests a method comprising all of the steps of dependent claim 25, and in particular the use of first and second erase beams to set luminance levels.

Conclusion

The art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tegreene et al. U.S. Patent Application Publication US 2002/0171937 A1 teaches a system and method for producing an image with a screen using erase (off) and image (on) light sources.

Tegreene et al. U.S. Patent Application Publication US 2002/0171776 A1 teaches a system and method for capturing, transmitting, and displaying an image.

Tegreene et al. U.S. Patent Application Publication US 2002/0181097 A1 teaches a system and method for using multiple beams to respectively scan multiple regions of an image.

Sano et al. U.S. Patent US Patent Application Publication US 2003/0103162 A1 teaches an image display device.

Katagiri et al. U.S. Patent 5,235,437 teaches an analog/digital image processor apparatus with liquid crystal light modulator.

Katagiri et al. U.S. Patent 5,327,263 teaches an image processing apparatus employing a spatial light modulator.

Kubota et al. U.S. Patent 6,513,938 B2 teaches a multi-display device and multi-display system.

Ioka U.S. Patent 6,558,006 B2 teaches an image projection display apparatus using plural projectors and projected image compensation apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (703) 308-4801. The examiner can normally be reached on Monday through Friday.

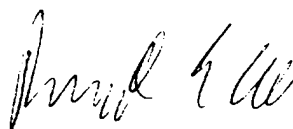
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on Monday through Thursday at (703) 308-2847. The fax phone numbers for the organization where this application or proceeding

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is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MJK
July 8, 2003


MICHAEL J. KOSOV
TECHNICAL EXAMINER